

In the claims:

Amendments to the claims

1. (Currently Amended) A process for the production of alcohols, comprising:

A2 (a) subjecting an olefin to a hydration reaction with water to form a reaction product including the corresponding alcohol, the olefin having a carbon chain of 2 to 12 carbon atoms, the carbon chain being selected from a linear chain and a branched chain, the reaction being conducted in the presence of a solid state olefin hydration catalyst, the temperature and pressure of the hydration reaction being selected so that the olefin is largely in a vapour phase and the alcohol is in the liquid phase, the olefin being in a molar excess when compared with water;

(b) recovering a product stream containing alcohol and volatile components from step (a) and subjecting the product stream to heating and returning the volatile components to step (a) for further processing; and

(c) ~~(b)~~ simultaneously recovering the alcohol as a substantially anhydrous liquid.

2.-5 (Original)

A3 6. A process according to Claim 5, wherein the water is fed to the process at a feed ratio of water to olefin is in the range of 1:3 to 1:5.

7-13 (Original)

14.- 29 (Cancelled)

30. (New) A process for the production of alcohols, comprising:

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(a) subjecting an olefin to a hydration reaction with water to form a reaction product including the corresponding alcohol, the olefin having a carbon chain of 2 to 12 carbon atoms, the carbon chain being selected from a linear chain and a branched chain, the reaction being conducted in the presence of a solid state olefin hydration catalyst having hydrophobic properties, the temperature and pressure of the hydration reaction being selected so that the olefin is largely in a vapour phase and the alcohol is in the liquid phase, the olefin being in a molar excess when compared with water; and

(b) simultaneously recovering the alcohol as a substantially anhydrous liquid.

31. (New) A process according to Claim 30, wherein the reaction in step (a) is effected by catalytic distillation.

32. (New) A process according to Claim 30, wherein step (a) is effected at a pressure of 0.1 to 4 MPa.

33. (New) A process according to Claim 32, wherein step (a) is effected in a temperature range of 50-225 °C.

34. (New) A process according to Claim 33, wherein water is fed to the process at a feed ratio of water to olefin is in the range of 1:3 to 1:5.

35. (New) A process according to Claim 34, wherein the pressure is about 2 kPa.

36. (New) A process according to Claim 35, wherein the olefin has a carbon chain of 2-4 carbon atoms.

37. (New) A process according to Claim 36, wherein the catalyst is a silicate, having a highly regular crystallographic structure characterized by a large surface area, and interconnected cavities within the regular structure.

38. (New) A process according to Claim 36, wherein the olefin is propene, and the corresponding alcohol is isopropanol.

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39. (New) A process according to Claim 36, wherein the olefin is isobutene, and the corresponding alcohol is tertiary butanol.